

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

SOLAS OLED LTD.

Plaintiff,

v.

SAMSUNG DISPLAY CO., LTD.,
SAMSUNG ELECTRONICS CO., LTD.,
AND SAMSUNG ELECTRONICS
AMERICA, INC.,

Defendants.

Civil Action No. 2:19-cv-00152-JRG


ORAL HEARING REQUESTED

**DEFENDANTS' RULE 50(b) MOTION FOR JUDGMENT AS A MATTER OF LAW
OF NON-INFRINGEMENT, NO WILLFUL INFRINGEMENT, AND INVALIDITY
OF THE ASSERTED CLAIMS OF THE '311 PATENT**

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I. INTRODUCTION

Defendants Samsung Display Co., Ltd. (“SDC”), Samsung Electronics Co., Ltd. (“SEC”), and Samsung Electronics America, Inc. (“SEA”) respectfully move under Federal Rule of Civil Procedure 50(b) for judgment as a matter of law (“JMOL”) of (1) non-infringement, (2) no willful infringement, and (3) invalidity of the asserted claims of U.S. Patent No. 9,256,311 (“the ‘311 patent”). Defendants respectfully request an oral hearing on the motion.

II. LEGAL STANDARD

Judgment as a matter of law under Rule 50 is proper when “a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue.” *Abraham v. Alpha Chi Omega*, 708 F.3d 614, 620 (5th Cir. 2013). Jury findings must be supported by “substantial evidence.” *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1363 (Fed. Cir. 2004). “Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Id.* Accordingly, judgment as a matter of law is warranted “[i]f . . . the facts and inferences point so strongly and overwhelmingly in favor of one party that the Court believes that [a] reasonable [jury] could not arrive at a contrary verdict.” *Med. Care Am., Inc. v. Nat’l Union Fire Ins. Co.*, 341 F.3d 415, 420 (5th Cir. 2003).

Conclusory expert testimony does not qualify as substantial evidence. *See VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1333 (Fed. Cir. 2014) (applying Fifth Circuit law). In resolving a Rule 50 motion, the court must “excise inadmissible evidence,” including unreliable expert testimony. *Hodges v. Mack Trucks, Inc.*, 474 F.3d 188, 193 (5th Cir. 2006). Conclusory statements and speculations are “insufficient to sustain a jury’s verdict.” *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1172 (Fed. Cir. 2015); *LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012). Thus, “[w]hen an expert opinion is not supported by sufficient facts to validate it in the eyes of the law, or when indisputable record facts contradict or otherwise render

the opinion unreasonable, it cannot support a jury's verdict." *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993).

III. DEFENDANTS ARE ENTITLED TO JMOL BECAUSE SOLAS FAILED TO PRESENT SUFFICIENT EVIDENCE TO SUPPORT A FINDING OF DIRECT INFRINGEMENT.

Where "no reasonable fact finder could determine that the accused devices meet every limitation of the properly construed claims," JMOL of non-infringement is warranted. *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999). There was no substantial evidence that the accused devices meet all limitations of the asserted claims.

Plaintiff Solas OLED Ltd. ("Solas") asserted that independent claim 7 and its dependent claim 12 of the '311 patent were infringed by 13 products: the Galaxy S8, Galaxy S9, Galaxy S9 Plus, Galaxy Note 9, Galaxy S10, Galaxy S10 Plus, Galaxy S10 5G, Galaxy Note 10, Galaxy Note 10 Plus, Galaxy S20, Galaxy S20 Plus, Galaxy S20 Ultra, and Galaxy Z Flip ("the '311 Accused Products"). *See, e.g.*, 3/2/2021 Tr. (Public) 399:1–7 (Mr. Credelle). No reasonable jury could have concluded that any of them satisfied the limitation "the substantially flexible substrate and the touch sensor are configured to wrap around one or more edges of a display" (*i.e.*, "the wrap around" limitation) required by claims 7 and 12. DTX-3 ('311 patent) at 9:43–45, 10:22–23.

A. The '311 Accused Products do not infringe because they do not have a "substantially flexible substrate" and "touch sensor" that are "configured to wrap around one or more edges of a display."

The Court construed "configured to wrap around one or more edges of a display" to mean "configured to wrap around one or more intersections between two or more surfaces of a display." Dkt. 99 (CC Mem. and Order) at 28. In construing the term, the Court made clear that displays that have an edge are distinguished from curved or pebble-shaped displays, as the latter is "an example in which 'there is no substantial distinction between surfaces,'" and "[t]he disputed term should therefore be construed in accordance with this distinction...." *Id.* at 27. The evidence showed that

the '311 Accused Products have a touch sensor on the top surface of a curved or pebble-shaped display, not wrapped around an edge of the display. No reasonable jury could have concluded that the '311 Accused Products infringe this limitation of asserted claims 7 and 12.

The evidence at trial showed that [REDACTED]

[REDACTED]

[REDACTED] For example, the cross-section of the Galaxy S8's display module, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The touch sensor for these products [REDACTED]

[REDACTED]

[REDACTED] It thus does

not wrap around an intersection between two or more surfaces of the display. Indeed, these displays have no separate side surface used to display images; they contain a single curved display surface.

To argue infringement, Solas relied on the theory that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] 3/8/2021 Tr. (Public) 907:8–12 (Solas’s Closing). Solas’s theory was clearly inconsistent with the ’311 patent and the Court’s claim construction.

First, Solas’s infringement theory is flatly inconsistent with the ’311 patent’s disclosure of curved edges. The ’311 patent makes clear that an “edge” may be a curved area that separates two surfaces. *See* DTX-3 at 7:47–55 (describing edges having a radius); *id.* at 7:52–55 (describing sharp and less-sharp edges). Yet Solas’s theory defines such a curved area as being its own separate “surface,” rather than an intersection between surfaces. Indeed, Solas’s position that an “edge” exists wherever a change in curvature occurs (e.g., where a flat region of a surface starts to curve) would render the rounded edges described in the ’311 patent an impossibility. In its claim construction opinion, the Court cited the patent’s disclosure of “‘sharper edges’ having a particular radius of curvature,” which the Court explained weighed against interpreting “edges” as “referring to ‘line segments’ at an intersection.” CC Mem. and Order at 27. Yet, under Solas’s interpretation, edges that are curved could not exist. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

As Solas itself had previously admitted, the arrangement it illustrated in *Markman* briefing (Dkt. 82 at 9) shows a curved edge within the meaning of the '311 patent that has a radius. Yet Solas's infringement theory would treat that curved single edge as being two "edges" at "intersections" between three "surfaces" (the top and side surfaces, plus what Solas now calls a "curved" surface). In doing so, Solas's infringement theory places the "edge" at a different location than the '311 patent: The patent describes the edge as being within the curved area, DTX-3 at 7:47–56, while Solas's theory assumes that edges are located where each flat surface starts to curve. Only by redefining what an "edge" is and where it is located in manners contradicting the '311 patent did Solas argue for an infringement finding at trial.

Second, Solas relied on a theory that [REDACTED]

[REDACTED], which is inconsistent with the '311 patent's disclosure that a single surface can have both flat portions and curved portions. DTX-3 at 7:52–55 ("For sharper edges (e.g., with radius of less than 1 mm), the flexible conductive material . . . may be thicker or wider at the sharper edges than *at the flat portions of surfaces.*" (emphasis added)). The patent's reference to "flat portions of surfaces" shows that a single surface may have both flat and non-flat (*i.e.*, curved) portions in the context of the '311 patent—contrary to Solas's infringement theory that [REDACTED]

Third, Solas's infringement theory was inconsistent with the Court's claim construction and the '311 patent by treating "curved devices" and "pebble-shaped devices" as having edges. The Court explained in its claim construction opinion that "[i]n particular embodiments, the electrode pattern [of the touch sensor] may wrap around an edge 603" while "[i]n other particular

embodiments, touch-sensitive apparatus 612 may be wrapped around a curved surface,” CC Mem. and Order at 26–27 (quoting ’311 patent at 7:37–8:2), and that “the patentee *distinguished between wrapping around an ‘edge’ and wrapping around ‘a pebble-shaped or curved device,’*” *id.* at 27 (emphasis added) (citing ’311 patent at 7:55–56). The Court made clear that devices having an edge are distinguished from curved or pebble-shaped devices, as the latter is “an example in which ‘there is no substantial distinction between surfaces.’” *Id.* “The disputed term should therefore be construed in accordance with this distinction. . . ,” *id.*,¹ meaning that wrapping around a pebble-shaped or curved device does not meet the claim limitation. Solas’s expert testimony “must [be] disregard[ed]” because it was based on an “incorrect understanding of the claim construction.” *Cordis Corp. v. Boston Sci. Corp.*, 658 F.3d 1347, 1357–58 (Fed. Cir. 2011).

Under the Court’s claim construction, no reasonable jury could have concluded that the ’311 Accused Products, which were shown to have a curved or pebble shaped display, have a “substantially flexible substrate” and “touch sensor” that are “configured to wrap around one or more *edges* of a display, as required by claims 7 and 12. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹ Indeed, after the patent examiner rejected the claims over prior art in an Office Action dated March 19, 2015, the patent applicant filed an amendment dated June 19, 2015, to specifically narrow the claims scope to “wrap[ping] one or more edges of a display” and canceled original claim 15 that covered “curved” embodiments. *See* DTX-6 (’311 Patent File History) at 0395 (March 3, 2015 Response); *id.* at 0427–0444 (March 19, 2015 Office Action); *id.* at 0447–0457 (June 19, 2015 Response) (canceling original claim 15). And the inventors agreed that a pebble-shaped device does not have an edge. *See, e.g.*, 3/2/2021 Tr. (Public) 343:14–344:3 (Mr. Yilmaz).

Solas’s infringement theory should be rejected as a matter of law. *Novartis Pharm. Corp. v. Abbott Labs.*, 375 F.3d 1328, 1339 (Fed. Cir. 2004) (affirming JMOL of non-infringement after “reject[ing] [plaintiff’s] theory of infringement” as “inconsistent with the claim construction”).

B. The '311 Accused Products do not infringe because they do not have the type of “substrate” required by claims 7 and 12.

Claims 7 and 12 require a “substantially flexible substrate” that is “configured to wrap around one or more edges of a display.” According to the claims (and as disclosed in the ’311 patent), the “substantially flexible substrate” is a separate and distinct structure from a “display.” There is no dispute that a “display” is not part of the claimed device. *See, e.g.*, 3/4/2021 Tr. (Public) 669:22–670:2 (Dr. Sierros); [REDACTED]

[REDACTED] 3/2/2021 Tr. (Public) 314:11–15 (Mr. Shaikh).

There is no “substantially flexible substrate” in the ’311 Accused Products that is configured to wrap around a display. Solas argued at trial that the thin film encapsulation (“TFE”) layer in the ’311 Accused Products satisfied the “substantially flexible substrate” required by the claims. The TFE layer, however, [REDACTED]

[REDACTED] The documents describing the display panels of the '311 Accused Products all show the TFE layer is part of the display. [REDACTED]

[REDACTED]. Mr. Kwak explained that [REDACTED]

Indeed, there is no dispute that the

[REDACTED]
[REDACTED] Mr. Kwak's testimony that [REDACTED]

[REDACTED] Mr. Credelle offered no documentary evidence that described the TFE layer as being a component separate from the display, and his assertion that [REDACTED] was conclusory. [REDACTED]

[REDACTED] No reasonable jury thus could have concluded that the TFE layer is *not* part of the display.

[REDACTED]
[REDACTED] Accordingly, no reasonable jury could have concluded that the TFE layer, which is part of the display, satisfies the limitation of "the substantially flexible substrate . . . configured to wrap around one or more edges of a display" required by the claims. Defendants' JMOL thus should be granted.

C. The Galaxy Z Flip does not infringe claims 7 and 12.

Claims 7 and 12 require that "the touch sensor . . . wrap[s] around one or more edges of a display." The Galaxy Z Flip, however, has no such configuration. [REDACTED]

[REDACTED]
[REDACTED]
Dr. Sierros's testimony on this point was unrebutted. Moreover, [REDACTED]

[REDACTED]
[REDACTED] This is also unrebutted. The Galaxy Z Flip does not have curvature at the sides of the display like the other '311 Accused Products. *See* DTX-471. At no point is the touch sensor wrapped around a display edge as the claims require.

Solas's only evidence was the testimony of Mr. Credelle, whose limited testimony about the Galaxy Z Flip simply asserted [REDACTED]

[REDACTED] This, however, is not what the claims require. Mr. Credelle never testified that the *touch sensor wrapped around an edge of a display* as required by claims 7 and 12. Thus, Solas has no substantial evidence of infringement.

No reasonable jury could have concluded that the Galaxy Z Flip infringes claims 7 and 12, and JMOL should therefore be granted in Defendants' favor.

D. Solas failed to provide sufficient particularized evidence of infringement.

Solas failed to present particularized evidence for each device accused of infringing claims 7 and 12 of the '311 patent, including the Galaxy Z Flip, as would be necessary to prove infringement. For each and every limitation of the asserted claims, Mr. Credelle presented evidence from the Galaxy S8—only one of the '311 Accused Products. Mr. Credelle's bare assertion that he analyzed all of the '311 Accused Products, *see, e.g.*, 3/2/2021 Tr. (Public) 399:10–15 (Mr. Credelle), is merely conclusory and does not qualify as substantial evidence that could support the verdict for all '311 Accused Products, *VirnetX*, 767 F.3d at 1333. Mr. Credelle's assertions that the '311 Accused Products other than the Galaxy S8 infringe claims 7 and 12 are conclusory and speculative, and thus “insufficient to sustain a jury's verdict.” *MobileMedia*, 780 F.3d at 1172; *LaserDynamics*, 694 F.3d at 67.

IV. DEFENDANTS ARE ENTITLED TO JMOL BECAUSE SOLAS FAILED TO PRESENT SUFFICIENT EVIDENCE TO SUPPORT A FINDING OF INDIRECT INFRINGEMENT.

Solas had the burden to establish any alleged induced infringement of the asserted claims by a preponderance of the evidence. The evidence at trial, however, provided no legally sufficient evidentiary basis for the jury to find that any Defendant induced infringement of the '311 patent.

First, as discussed above, Solas did not present evidence that could support a finding of direct infringement by SEA. Yet Solas's only theory was inducement by SDC or SEC based on

purported direct infringement by SEA. *See* 3/1/2021 Tr. (Public) 161:5–7 (Solas’s Opening); 3/8/2021 Tr. (Public) 864:12–16 (Jury Instructions).

Second, Solas presented no opinion or testimony about “indirect” or “induced” infringement at trial (never even used those terms before the jury). During argument on Rule 50(a) JMOL motions, the only basis counsel for Solas identified for these claims was the assertion, without elaboration, that “Solas has also shown indirect infringement of the asserted claims through at least Mr. Kwak’s and Mr. Kim’s and Mr. Repice’s admissions that Samsung is a global company and a global leader in the smartphones and sells its products worldwide.” 3/5/2021 Tr. (Public) 792:13–18. However, these alleged admissions could not provide the requisite predicate for finding that either SDC or SEC “actively induced infringement” by SEA.

Third, SDC and SEC could be liable for active inducement of infringement only if they “took an affirmative act to encourage infringement [by SEA] ***with the knowledge that the induced acts constitute patent infringement.***” *Info-Hold, Inc. v. Muzak LLC*, 783 F.3d 1365, 1372 (Fed. Cir. 2015) (emphasis added). This would require “actual knowledge or willful blindness,” the latter “a high standard, requiring that the alleged inducer (1) subjectively believe that there is a high probability that a fact exists and (2) take deliberate actions to avoid learning of that fact.” *Id.* at 1372–73. Yet there is no evidence to support a finding of the required intent to cause infringement. It is insufficient that SDC and SEC were aware that SEA was selling accused devices in the United States, or that they intended for SEA to do so. Solas failed to present evidence of knowledge of, and specific intent to cause, infringement. Further, generalized evidence as to SDC concerning a large set of patents does not support a showing of knowledge about a specific patent, *cf. Finjan, Inc. v. Cisco Sys. Inc.*, No. 17-cv-00072, 2017 WL 2462423, at *5 (N.D. Cal. Jun. 7, 2017), and

no evidence was presented that SEC had pre-suit knowledge of the '311 patent—let alone a belief that there was a high probability that SEA was infringing the '311 patent.

V. DEFENDANTS ARE ENTITLED TO JMOL BECAUSE SOLAS FAILED TO PRESENT SUFFICIENT EVIDENCE TO SUPPORT A FINDING OF WILLFUL INFRINGEMENT.

Solas had the burden to establish willful infringement by a preponderance of the evidence. *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1934 (2016). To establish willful infringement, Solas was required to show that an infringing Defendant had both (1) knowledge of the patent, *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1341 (Fed. Cir. 2016), and (2) subjective intent, *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1371 (Fed. Cir. 2017). The Federal Circuit has made clear that mere knowledge of a patent is not enough; a further showing of bad faith conduct is required to establish willful infringement. *See SRI Int'l, Inc. v. Cisco Sys., Inc.*, 930 F.3d 1295, 1309 (Fed. Cir. 2019). Here, there was no legally sufficient evidentiary basis for a reasonable jury to find any Defendant willfully infringed the '311 patent.

A. There is no evidence of willful infringement by SEC or SEA.

Solas presented no evidence that either SEC or SEA had knowledge of the '311 patent prior to the lawsuit. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] SEC and SEA are both separate companies from SDC. *See, e.g.*, 3/3/2021 Tr. (Public) 470:7–471:16 (Mr. Repice). There is no evidentiary basis on which a reasonable jury could conclude either SEC or SEA had pre-suit notice of the '311 patent. And not only did Solas present no evidence that SEC and SEA had pre-suit knowledge of the '311 patent, but Solas did not present any evidence of egregious or bad-faith conduct by either SEC or SEA.

B. There is no evidence of adequate pre-suit notice of the '311 patent or of egregiousness or bad-faith conduct by SDC.

There is no substantial evidence of pre-suit notice of the '311 by SDC. Solas never contacted SDC about the '311 patent prior to filing suit. *See, e.g.*, 3/4/2021 Tr. (Public) 559:3-7 (Dr. O'Riordan). Nor is there any evidence that Atmel ever did.

Solas's "evidence" of pre-suit notice as to SDC was the testimony of its expert, Mr. Credelle, who mentioned [REDACTED]

[REDACTED]

[REDACTED], [REDACTED]

[REDACTED]

This type of generalized evidence is legally insufficient to establish knowledge of the '311 patent. *See, e.g., Finjan, Inc. v. Cisco Sys. Inc.*, No. 17-cv-00072, 2017 WL 2462423, at *5 (N.D. Cal. Jun. 7, 2017) ("Knowledge of a patent portfolio generally is not the same thing as knowledge of a specific patent."); *Evolved Wireless, LLC v. Samsung Elecs. Co., Ltd.*, No. 15-545, 2016 WL 1019667, at *4 (D. Del. Mar. 15, 2016) ("[A] patent included in an appendix containing dozens of patents does not place a defendant on notice of the patents-in-suit.").

Moreover, while [REDACTED]

[REDACTED]

[REDACTED], [REDACTED]

[REDACTED] Merely knowing that a patent exists is legally insufficient to establish the required notice of the patent for willfulness, for the very same reasons that knowledge of a patent portfolio generally is insufficient. *See supra*.

There is also no substantial evidence that SDC engaged in egregious behavior with respect to the '311 patent. Knowledge of the asserted patent and evidence of infringement is necessary,

but not sufficient, for a finding of willfulness. *See, e.g., Halo*, 136 S. Ct. at 1936 (Breyer, J., concurring). Willfulness also requires deliberate or intentional infringement. *Eko Brands, LLC v. Adrian Rivera Maynez Enters., Inc.*, 946 F.3d 1367, 1378 (Fed. Cir. 2020). Yet Solas offered no evidence of deliberate or intentional infringement. Moreover, “[t]o establish willfulness, the patentee must show the accused infringer had a *specific intent* to infringe at the time of the challenged conduct.” *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 987 (Fed. Cir. 2021) (emphasis added). Solas failed to prove such a specific intent. Solas failed to present any evidence to show that SDC had a subjective intent to infringe or that any alleged infringement was “egregious,” “deliberate,” “wanton,” or otherwise characteristic of the type of infringement that warrants the Court exercising its discretion to impose the “punitive” sanction of enhanced damages. *Halo*, 136 S. Ct. at 1932.

Apart from arguing that SDC infringed, which is inadequate for willfulness, the only argument that Solas made was of purported copying. However, there is no substantial evidence of copying. To the contrary, even if the accused products could be said to fall within the asserted claims (which they do not), the technology developed by SDC and used in the accused products was independently developed, differs significantly from any device made by Atmel, and cannot be said to copy any Atmel product. *See, e.g., 3/2/2021 Tr. (Public) 315:19–316:3 (Mr. Shaikh).*

The trial record establishes that

Id. Solas’s assertion of copying rested on testimony of Mr. Shaikh that he had presented an Atmel

external metal mesh product to SDC over the course of his meetings between 2011 and 2016 and that SDC had tested it, along with associated testimony of Solas's expert, Mr. Credelle, *see* 3/2/2021 Tr. (Public) 302:5–8 (Mr. Shaikh). Critically, however, there was no evidence that any product presented to or tested by SDC actually embodied a claimed invention of the '311 patent. To the contrary, Solas admitted that Atmel had never offered any product that practiced claims of the '311 patent. *See, e.g.*, 3/4/2021 Tr. (Public) 558:22–559:2 (Dr. O'Riordan).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Mr. Credelle did not testify that PTX-015 is about an accused product (it is not).² Mr. Credelle did not identify anything in PTX-015 allegedly showing information from Atmel relating to any element of the asserted claims; he merely referred generically to [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] And, as mentioned above, there was no evidence that any Atmel sample provided to SDC practice any asserted claim. Thus, there could be no reasonable inference that any Atmel product was copied.

² PTX-015 concerns the Galaxy Note 7, which Solas did not accuse of infringing the '311 patent. *See, e.g.*, 3/2/2021 Tr. (Public) 399:1–7 (Mr. Credelle).

In addition, there was no evidence that any individual at SDC who received information about Atmel's product offering had any involvement in the development of the touch sensor in the accused products. [REDACTED]

Moreover, the evidence established fundamental and indisputable differences between the technology developed by SDC and embodied in the accused products (integrated touch sensors) and Atmel's device (an external touch sensor). [REDACTED]

Indeed, Mr. Shaikh admitted that he had been informed that SDC wanted to print touch sensors directly on displays instead of using an external touch sensor such as what Atmel offered. *See, e.g.,* 3/2/2021 Tr. (Public) 310:4–10. Mr. Shaikh further admitted that Atmel had never printed touch sensors directly onto displays and lacked the technology to do so. *See, e.g.,* 3/2/2021 Tr. (Public) 315:19–316:3. The integrated touch sensors of the accused products, which print a touch sensor directly onto the display, represent an entirely different design from Atmel's technology. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] In addition, Dr. Sierros testified that SDC's OLED displays do not infringe the '311 patent. *See, e.g.*, 3/4/2021 Tr. (Public) 660:11.

At bottom, Solas sought to suggest that SDC copied the idea of using metal mesh. But even were there evidence to support the notion, which there was not, it could not support a finding of willfulness because a metal mesh touch sensor was not an invention of the '311 patent. Metal mesh touch sensors were well-known in the prior art, as Solas itself admitted. *See, e.g.*, 3/1/2021 Tr. (Public) 204:9–10 (Solas's Opening) (admitting that metal mesh is "not something we invented"); [REDACTED] 3/4/2021 Tr. (Public) 661:13–662:22 (Dr. Sierros). The Yilmaz prior art reference, for instance, indisputably disclosed a metal mesh touch sensor. DTX-167 (Yilmaz) ¶¶ 22, 155–56; 3/2/2021 Tr. (Public) 358:7–10 (Mr. Yilmaz). The Patent Office repeatedly rejected proposed claims directed to metal mesh touch sensors precisely because of the prior art. DTX-6 at 0427–0444 (March 19, 2015 Office Action). SDC cannot be said to have willfully infringed based on purportedly copying a feature of the prior art.

Regardless, the evidence shows that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Even were there infringement (which there was not), SDC had reasonable defenses and there is no substantial evidence to find that its conduct rose to the level of willful infringement. Therefore, JMOL of no willful infringement should be granted.

VI. DEFENDANTS ARE ENTITLED TO JMOL BECAUSE DEFENDANTS PRESENTED CLEAR AND CONVINCING EVIDENCE OF INVALIDITY.

At trial, Defendants presented un rebutted evidence that claims 7 and 12 of the '311 patent were obvious based on U.S. Publication No. US 2010/0045632 ("Yilmaz") (DTX-167) and U.S. Publication No. US 2008/0223708 ("Joo") (DTX-169). Both indisputably were prior art references. The evidence clearly and convincingly established obviousness, and Solas presented no rebuttal evidence. Accordingly, the Court should enter JMOL that claims 7 and 12 are obvious based on the combination of Yilmaz and Joo.

Defendants also presented evidence that claims 7 and 12 were anticipated by U.S. 9,400,576 ("Chen") (DTX-163). While Solas attempted to antedate Chen, it failed to present evidence that could support a finding that Chen is not prior art under governing precedent. The Court should therefore enter JMOL that Chen is prior art and, if it does not hold claims 7 and 12 invalid as obvious under Yilmaz and Joo, hold a new trial on invalidity over Chen because the jury could have returned a "no invalidity" verdict on the basis that Chen was not prior art.

A. A reasonable jury could only conclude that the asserted claims of the '311 patent would have been obvious over Yilmaz and Joo.

Defendants presented clear and convincing evidence that claims 7 and 12 would have been obvious to a person of ordinary skill in the art in light of the Yilmaz and Joo references. *See, e.g.*, 3/4/2021 Tr. (Public) 691:14–17 (Dr. Sierros). Solas presented no contrary evidence. For example:

- 7[preamble] (“A device”): Yilmaz discloses a capacitive touch screen device. *See, e.g.*, 3/4/2021 Tr. (Public) 691:21–23, 692:7–13 (Dr. Sierros); DTX-167 (Yilmaz) at ¶ 75.
- 7[a] (“substantially flexible substrate”): Yilmaz discloses a plastic film such as polyethylene terephthalate (“PET”) as the substantially flexible substrate. *See, e.g.*, 3/4/2021 Tr. (Public) 692:16–693:18 (Dr. Sierros); 3/2/2021 Tr. (Public) 356:7–13, 358:14–18 (Mr. Yilmaz); DTX-167 at ¶¶ 75, 105, 120.
- 7[b] (“a touch sensor disposed on the substantially flexible substrate”): Yilmaz discloses position sensors made from conductive material that are put on the PET substrate. *See, e.g.*, 3/4/2021 Tr. (Public) 693:19–694:18 (Dr. Sierros); 3/2/2021 Tr. (Public) 356:7–25, 358:14–359:9 (Mr. Yilmaz); DTX-167 at ¶¶ 75, 119–20, 155, Figs. 12 and 17.
- 7[c] (“the touch sensor comprising a plurality of capacitive nodes formed from drive or sense electrodes made of flexible conductive material configured to bend with the substantially flexible substrate”): Yilmaz discloses capacitive position touch sensors that are made up of drive and sense electrodes that form capacitive nodes and that are made of flexible conductive material configured to bend with the substantially flexible substrate (e.g., PET). Yilmaz further describes using thin wires or mesh of wire, using materials such as copper, gold, silver, for the drive and sense electrodes. *See, e.g.*, 3/4/2021 Tr. (Public) 694:19–697:12 (Dr. Sierros); 3/2/2021 Tr. (Public) 356:7–357:3, 358:14–359:9 (Mr. Yilmaz); DTX-167 at ¶¶ 1, 22, 130, 155–56, Figs. 12 and 17.
- 7[d] (“the flexible conductive material of the drive or sense electrodes comprises first and second conductive lines that electrically contact one another at an intersection to form a mesh grid”): Yilmaz discloses that the drive and/or sense electrodes are made of a mesh or filigree pattern of interconnected lines of highly conductive material. Those lines

electrically contact one another at an intersection to form a mesh grid. *See, e.g.*, 3/4/2021 Tr. (Public) 697:13–698:21 (Dr. Sierros); 3/2/2021 Tr. (Public) 356:7–359:9 (Mr. Yilmaz); DTX-167 at ¶¶ 22, 155–56.

- 7[f] (“one or more computer-readable non-transitory storage media embodying logic that is configured when executed to control the touch sensor.”):³ Yilmaz discloses a controller coupled to the drive and sense electrodes and that controls their operation, and further discloses that the operational functionality is provided by an integrated circuit chip such as a suitably programmed general purpose microprocessor, or field programmable gate array, or an application specific integrated circuit, especially in a microcontroller format. *See, e.g.*, 3/4/2021 Tr. (Public) 706:1–707:19 (Dr. Sierros); 3/2/2021 Tr. (Public) 357:19–358:13 (Mr. Yilmaz); DTX-167 at ¶¶ 94, 119.
- 12 (“The device of claim 7, wherein the touch sensor further comprises electrically-isolated structures made of conductive material comprising a conductive mesh.”): Yilmaz discloses that the drive and sense electrodes can be metal mesh electrodes and be electrically-isolated from each other to meet this limitation. Yilmaz also discloses regions with “infilling electrodes” that are “made of the same material and have the same thickness and electrical properties of the sense electrodes” to meet this limitation. *See, e.g.*, 3/4/2021 Tr. (Public) 708:6–709:13 (Dr. Sierros); DTX-167 at ¶¶ 22, 98, 155.

Solas did not rebut any of this testimony.

The evidence clearly demonstrated that the Yilmaz reference discloses the substantially flexible substrate and touch sensor claimed in the ’311 patent and that they could be bent to wrap

³ The construction of “computer readable non-transitory storage media” includes (but is not limited to) “semiconductor-based integrated circuits,” CC Mem. and Order at 7, as found in Yilmaz, 3/4/2021 Tr. (Public) 706:1–707:19 (Dr. Sierros).

around an edge of display. Mr. Yilmaz testified that the Yilmaz prior art reference disclosed a copper mesh touch sensor on a PET substrate that was flexible. *See, e.g.*, 3/2/2021 Tr. (Public) 354:23–359:9 (Mr. Yilmaz). The Yilmaz reference used the same touch sensor and PET substrate as in the '311 patent. *See, e.g.*, 3/4/2021 Tr. (Public) 692:16–696:25 (Dr. Sierros) (“[T]his is exactly the same technology material.”). Moreover, Mr. Yilmaz admitted that the copper mesh touch sensor on the flexible PET substrate could be roll-to-roll manufactured, meaning it could be bent and curved. *See, e.g.*, 3/2/2021 Tr. (Public) 345:20–349:9, 350:24–354:22 (Mr. Yilmaz).

As for the “wrap around” limitation 7[e], Mr. Yilmaz admitted that by 2007 he had used copper for the touch sensor electrodes, and that he had manufactured copper mesh electrodes on flexible PET substrates that would unroll and re-roll without damage and could “wrap around,” and that the Yilmaz reference disclosed this copper mesh touch sensor and PET substrate. *See, e.g.*, 3/2/2021 Tr. (Public) 345:20–354:22, 355:1–359:3 (Mr. Yilmaz). There can thus be no dispute that the Yilmaz reference disclosed a touch sensor and substantially flexible substrate that was manufactured in a roll-to-roll fashion and could wrap around surfaces at least in the manner that Solas claims to infringe. Dr. Sierros also explained that because Joo explains advantages and motivation to use touch sensitive portions on both the top and side surfaces of a display, it would have been obvious to use the Yilmaz reference’s touch sensor and PET substrate to wrap around one or more edges of a display. *See, e.g.*, 3/4/2021 Tr. (Public) 698:22–705:25 (Dr. Sierros); DTX-169 (Joo) at ¶¶ 63, 67. This combination does not rely on a particular way that Joo makes its devices or on its manufacturing methods. *See, e.g.*, 3/4/2021 Tr. (Public) 705:2–13 (Dr. Sierros).

Defendants thus presented clear and convincing evidence of obviousness. Solas did not present any contrary evidence, nor any evidence of secondary considerations of nonobviousness.

Thus, JMOL should be granted that claims 7 and 12 of the '311 patent were obvious in view of Yilmaz and Joo. *See, e.g.*, 3/4/2021 Tr. (Public) 691:14–17, 707:20–708:5, 709:9–18 (Dr. Sierros).

B. Solas failed to antedate Chen.

No reasonable jury could conclude that Chen is not prior art, because Solas failed to present evidence that could establish an invention date earlier than Chen under Federal Circuit precedent. To establish conception, the party seeking to antedate a reference must show that the inventor had possession of every feature recited in the asserted claims at the time of the alleged conception. *Coleman v. Dines*, 754 F.2d 353, 359 (Fed. Cir. 1985). To show actual reduction to practice, the party must also show actual reduction to practice of every feature in the asserted claims, and show that a prototype worked for the intended purpose. *See, e.g., Cooper v. Goldfarb*, 154 F.3d 1321, 1327 (Fed. Cir. 1998); *Shu-Hui Chen v. Bouchard*, 347 F.3d 1299, 1311 (Fed. Cir. 2003); *Estee Lauder Inc. v. L'Oreal, S.A.*, 129 F.3d 588, 594 (Fed. Cir. 1997) (requiring successful testing). In proving conception and actual reduction to practice, the party must provide corroborating evidence independent of the inventor. *See, e.g., Kolcraft Enters., Inc. v. Graco Children's Prods., Inc.*, 927 F.3d 1320, 1324–25 (Fed. Cir. 2019). Crucially, an inventor's own testimony and documents are insufficient because they are not independent of the inventor. *See, e.g., Apator Miitors ApS v. Kamstrup A/S*, 887 F.3d 1293, 1297 (Fed. Cir. 2018). Metadata and filenames of an inventor's documents are not independent evidence. *See, e.g., Kolcraft*, 927 F.3d at 1323–25; *EMC Corp. v. Pure Storage, Inc.*, 204 F. Supp. 3d 749, 760–62 (D. Del. 2016).

Solas argued that the invention date of claims 7 and 12 was in January 2011. *See, e.g.*, 3/1/2021 Tr. (Public) 187:6–7. However, there is no independent corroborating evidence that the named inventors conceived of all limitations of those claims in January 2011. In fact, there is not a single document—let alone a document independent of the named inventors—showing that there was a meeting in January 2011 in which any element of these claims (much less all of them) was

conceived. For the alleged January 2011 date of invention, Solas relies solely on uncorroborated testimony of named inventors and Solas's expert parroting such testimony. *See, e.g.*, 3/2/2021 Tr. (Public) 395:9–10 (Mr. Credelle) (stating that invention date was “roughly in January 2011” based on inventor testimony); [REDACTED]

[REDACTED] This is legally insufficient. *See, e.g., Kolcraft*, 927 F.3d at 1324–25; *Apator*, 887 F.3d at 1295–97; *VirnetX*, 767 F.3d at 1333; *cf. Robroy Indus.-Texas, LLC v. Thomas & Betts Corp.*, Nos. 2:15-CV-512, 2017 WL 1319553, at *9 (E.D. Tex. Apr. 10, 2017) (expert may not simply summarize the statements of others). There is a complete lack of independent corroboration of the alleged January 2011 conception date, and for this reason alone Solas's argument to antedate Chen failed.

Moreover, in its attempt to antedate Chen, Solas pointed only to the inventors' own testimony and their own purported documents, including a [REDACTED]

[REDACTED]. All of these materials came from the named inventors, and for each of them there is no independent corroboration, including of authorship or dates. The mere testimony of named inventors or Mr. Credelle about the supposed dates of those documents is legally insufficient. *Kolcraft*, 927 F.3d at 1323–25. Solas's reliance on materials that were not independent of the inventors fails to satisfy the independent corroboration requirement as a matter of law. For this reason as well, Solas failed to satisfy its burden to provide corroboration evidence of the asserted conception date in January 2011, and JMOL should be granted that Chen qualifies as prior art.

Solas's effort to antedate Chen also necessarily failed for the independent reason that Solas did not present evidence that can corroborate actual reduction to practice on July 8, 2011, the alleged reduction to practice date. Solas did not present any physical prototype of the claimed inventions, nor any corroborating evidence that a prototype was actually successfully tested and shown to work for its intended purpose by that date when "configured to wrap around one or more edges of a display" as required by claims 7 and 12.

Solas's evidence fails to support its alleged actual reduction to practice date in two distinct respects. First, there was no evidence to corroborate that the inventors made a prototype that embodied the "wrap around" limitation. The purported [REDACTED] do not show this limitation. In particular, they do not show a touch sensor wrapping around an edge of a display. Neither testimony of a named inventor, nor Mr. Credelle's conclusory statement speculating that [REDACTED] [REDACTED], constituted independent corroborating evidence. *See, e.g.*, 3/2/2021 Tr. (Public) 378:15–24 (Mr. Yilmaz) ("I don't recall testing [the prototypes]."); *id.* at 361:19–362:12 (admitting Atmel did not even have curved displays).

Second, even were there a prototype that satisfied all elements of the claims, there was no independent evidence that such a device worked for its intended purpose. Not a single document was presented showing the results of any testing of a prototype. To the extent that the inventors made conclusory statements that they had working prototypes in July 2011, such testimony is not sufficient to show actual reduction to practice. At most, [REDACTED]

[REDACTED] Not only is there no evidence corroborating that [REDACTED]

[REDACTED] . [REDACTED]

[REDACTED]

[REDACTED] Thus, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] There is nothing to corroborate that [REDACTED]

[REDACTED]

[REDACTED] . Thus, this document is insufficient

evidence. *Cooper*, 154 F.3d at 1327 (“[T]here cannot be a reduction to practice of the invention . . .

without a physical embodiment which includes all limitations of the claim.” (alterations in

original)); *Eaton v. Evans*, 204 F.3d 1094, 1097 (Fed. Cir. 2000). The evidence simply showed

that [REDACTED] which could not

support any reasonable inference that the samples worked for their intended purpose.

Thus, no reasonable jury could have concluded that Solas presented evidence to support a

conclusion that conception and reduction to practice occurred when Solas alleged. The Court

should enter JMOL that Chen is thus prior art, and if claims 7 and 12 are not held invalid as obvious

under Yilmaz and Joo, hold a new trial on the invalidity of those claims over Chen.

VII. CONCLUSION

For the foregoing reasons, Defendants respectfully request that the Court enter JMOL of

non-infringement and no willful infringement of the '311 patent for all accused products, and

JMOL of invalidity of the asserted claims of the '311 patent.

Dated: April 19, 2021

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of the foregoing document via the Court's CM/ECF system per Local Rule CV-5(a)(3) this April 19, 2021.

/s/ Melissa R. Smith
Melissa R. Smith

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]